

**METHOD AND DEVICE FOR THE COMPENSATING VARIATIONS IN FUEL
COMPOSITION IN A GAS TURBINE SYSTEM**

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application is the US National Stage of International Application No. PCT/EP2004/011382, filed October 11, 2004 and claims the benefit thereof. The International Application claims the benefits of European application No. EP03023212.8 filed October 13, 2003, both applications are incorporated by reference herein in their entirety.

FIELD OF THE INVENTION

[0002] The invention relates to a method for compensating variations in the fuel composition in a gas turbine system, particularly in a gas turbine system consisting of at least two burner stages to be operated in parallel, and more particularly in a gas turbine system consisting of a pilot burner stage and a main burner stage.

BACKGROUND OF THE INVENTION

[0003] A gas turbine system includes in the simplest case, a compressor, a combustion chamber as well as a turbine. In the compressor, a compression of sucked-in air takes place, to which a fuel is subsequently added. In the combustion chamber, combustion of the mixture is undertaken, with the combustion gases being fed to the turbine, by which energy is drawn from the combustion gases and converted into mechanical energy.

[0004] These days, gas turbine systems are equipped with multi-stage combustion chambers, consisting of a plurality of burner stages to be operated in parallel, which depending on the utilization of the gas turbine systems, can be operated either individually or jointly. Typically, the parallel burner stages can comprise a main burner stage and a pilot burner stage, in which case the flame of the pilot burner stage should more particularly stabilize the flame of the main burner stage.

[0005] During the stationary operation of a gas turbine system, the released quantity of heat should, in essence, be kept constant. However, variations in the fuel quality lead to variations

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